

Criterion A: Investigate

Maximum: 6

Investigation is an essential stage in the design cycle. Students are expected to identify the problem, develop a design brief and formulate a design specification. Students are expected to acknowledge the sources of information and document these appropriately.

LoA	Grade 6 level descriptor	Grade 7 level descriptor	Grade 8 level descriptor	Grade 9 level descriptor	Grade 10 level descriptor
0	The student does not reach a standard described by any of the descriptors below.	The student does not reach a standard described by any of the descriptors below.	The student does not reach a standard described by any of the descriptors below.	The student does not reach a standard described by any of the descriptors below.	The student does not reach a standard described by any of the descriptors below.
1–2	The student considers the problem. The student investigates the problem.	The student considers the problem. The student investigates the problem, collecting information from a source.	The student states the problem. The student investigates the problem, collecting information from a source. The student considers some specifications.	The student states the problem. The student investigates the problem, collecting information from 2 sources. The student considers some specifications.	The student states the problem. The student investigates the problem, collecting information from sources. The student lists some specifications.
3–4	The student considers the problem. The student investigates the problem, collecting information from sources. The student lists some specifications.	The student considers the problem. The student investigates the problem, selecting information from some acknowledged sources. The student, with limited guidance, writes a specification	The student considers the problem. The student investigates the problem, selecting information from some acknowledged sources and, with guidance, carries out some analysis of the selected information. The student, with limited guidance, writes a specification and designs a test to use to evaluate the product against the specification	The student describes the problem, mentioning its relevance. The student investigates the problem, selecting and analysing information from some acknowledged sources. The student writes a specification and designs a test to use to evaluate the product against the specification.	The student describes the problem, mentioning its relevance. The student investigates the problem, selecting and analysing information from some acknowledged sources. The student describes a test to evaluate the product/solution against the design specification.
5–6	The student considers the problem within a wider context. The student investigates the problem, and begins questioning the value of information. The student lists specifications that must be met by their product. The student, with guidance, designs some simple tests.	The student considers the importance of the problem for life, society and/or the environment. The student investigates the problem, selecting information from a range of appropriate, acknowledged sources. The student lists specifications that must be met by their product. The student, with guidance, designs some simple tests.	The student considers the importance of the problem for life, society and/or the environment. The student investigates the problem, selecting information from a range of appropriate, acknowledged sources and, with guidance, evaluates it. With limited guidance, the student designs a method for testing to evaluate the product against the specification.	The student describes the problem, discussing its relevance. The student critically investigates the problem, evaluating information from a broad range of appropriate, acknowledged sources. The student describes detailed methods for appropriate testing to evaluate the product/solution against the design specification.	The student explains the problem, discussing its relevance. The student critically investigates the problem, evaluating information from a broad range of appropriate, acknowledged sources. The student describes detailed methods for appropriate testing to evaluate the product/solution against the design specification.